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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/625,201	07/21/2000	Natividadel Lobo	367.38796X00	5615

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EXAMINER

BURD, KEVIN MICHAEL

ART UNIT	PAPER NUMBER
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2631

DATE MAILED: 02/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/625,201

Applicant(s)

LOBO, NATIVIDADEL

Examiner

Kevin M Burd

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 July 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in the United Kingdom on 11/06/1998, 1/21/1998, 03/05/1995, 3/11/1998, 3/12/1998, 3/13/1998 and 7/1/1998. It is noted, however, that applicant has not filed a certified copy of these United Kingdom application as required by 35 U.S.C. 119(b).
2. Receipt is acknowledged of papers filed under 35 U.S.C. 119 (a)-(d) based on an application filed in United Kingdom on 1/21/1999. Applicant has not complied with the requirements of 37 CFR 1.63(c), since the oath, declaration or application data sheet does not acknowledge the filing of this foreign application. A new oath, declaration or application data sheet is required in the body of which the present application should be identified by application number and filing date. The declaration lacks reference to PCT/GB99/00201 filed 1/21/1999.

Drawings

3. Figures 1(a), 1(b), 1(c) and 9 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
4. The drawings are objected to because figures 5(a)-5(d), figures 6(a)-6(f), 9 and 10 are objected since the axis shown do not have labels. Labels clearly defining what

the axis are supposed to represent are necessary, preferably with units. Corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

5. Claim 11 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim 11 cannot claim dependency on another multiple dependent claim 10. See MPEP § 608.01(n). Accordingly, the claim 11 not been further treated on the merits.
6. Claim 13 is objected to because of the following informalities: the term "Nyquist" is spelled incorrectly. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 29-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 29 claims dependent on some claim but fails to indicate which claim on the last line of the claim. Claims 30 and 31 are rejected due to dependence on claim 29.

8. Claims 34-39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. This claim is an omnibus type claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-5, 8-10 and 12-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Wolf (US 4,319,359).

Regarding claims 1 and 34-39, Wolf discloses a method of defining a relationship between frequency and amplitude of a pulse function for acting on a data stream in figure 1 and column 3, lines 16-22. Wolf discloses a radio frequency drive source 13 may include drive amplifiers for increasing the carrier signal power output to the radio frequency power amplifier and may also contain phase and amplitude pre-distortion circuits for compensating for the distortion in later stages (column 3, lines 3-8). Therefore the amplitude of the pulse functions is defined to compensate for the distortions.

Regarding claims 2-5, 8 and 9, Wolf discloses for compensating for distortion in later stages. The power amplifier is a later stage in figure 1 and Wolf will compensate for a plurality of stages.

Regarding claims 10, 12 and 19-24, Wolf discloses a method of defining a relationship between frequency and amplitude of a pulse function for acting on a data stream in figure 1. Wolf discloses a radio frequency drive source 13 may include drive amplifiers for increasing the carrier signal power output to the radio frequency power amplifier and may also contain phase and amplitude pre-distortion circuits for compensating for the distortion in later stages (column 3, lines 3-8). The power amplifier is a later stage in figure 1 and Wolf will compensate for a plurality of stages. Therefore the amplitude of the pulse functions is defined to compensate for the distortions.

Regarding claim 13, Wolf discloses increasing the carrier power and thereby increasing the energy (column 3, lines 3-8).

Regarding claims 14-18, 26 and 27, Wolf discloses the communication system is an RF communication system.

Regarding claim 25, the pulses are shaped in the pulse duration modulator 17 (column 3, lines 16-22 and figure 1).

Regarding claims 28-33, Wolf discloses a method of defining a relationship between frequency and amplitude of a pulse function for acting on a data stream in figure 1. Wolf discloses a radio frequency drive source 13 may include drive amplifiers for increasing the carrier signal power output to the radio frequency power amplifier and may also contain phase and amplitude pre-distortion circuits for compensating for the distortion in later stages (column 3, lines 3-8). The power amplifier is a later stage in figure 1 and Wolf will compensate for a plurality of stages. Therefore, the amplitude of

the pulse functions is defined to compensate for the distortions. Wolf discloses the communication system is an RF communication system.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wolf (US 4,319,359) in view of Summers (US 5,070,254).

Regarding claims 6 and 7, Wolf discloses a method of defining a relationship between frequency and amplitude of a pulse function for acting on a data stream as stated above in paragraph 9. Wolf does not disclose compensating for a reconstruction filter. Reconstructive filters are useful for shaping filters to correct a pulse signal. Pulses encounter interference which can cause pulse shape and resolution to be degraded. However, the use of these filters can cause distortion in the signal as well. Summers discloses, it is well known to use pre-distortion to compensate for the distortion produced in a reconstruction filter (column 4, lines 40-42). It would have been obvious for one of ordinary skill in the art at the time of the invention to incorporate the teachings of Summers to use a reconstruction filter and to then compensate for the distortion caused by said filter in the system and method of Wolf for the reasons stated above.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Taylor, Jr. et al (US 4,600,891) discloses a modulator system shown in figure 1 that pre-distorts a signal to compensate for a down stream power amplifier (abstract). Kobayashi (US 5,808,511) discloses a similar system (column 1, lines 17-21 and column 2, lines 26-38).

Contact Information

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314, (for formal communications intended for entry or for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Burd, whose telephone number is (703) 308-7034. The Examiner can normally be reached on Monday-Thursday from 9:00 AM - 6:00 PM.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3800.



Kevin M. Burd
PATENT EXAMINER
2/15/2004